

Registered Cardiovascular Invasive Specialist (RCIS) Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Which arteries are visualized using the head hunter catheter?**
 - A. Left and right femoral arteries**
 - B. Left and right pulmonary arteries**
 - C. Left and right ICA and ECA**
 - D. Left and right coronary arteries**

- 2. Which of the following is a key feature of a platelet inhibitor?**
 - A. Increases heart rate**
 - B. Inhibits thrombin formation**
 - C. Blocks IIB/IIIa receptors**
 - D. Reduces blood pressure**

- 3. Chronic untreated hypertension is associated with which of the following?**
 - A. A risk factor for coronary artery disease**
 - B. Decreased preload**
 - C. Increased afterload**
 - D. Indication for Coumadin therapy**

- 4. Lidocaine converts from 2GM in 500cc to what concentration?**
 - A. 6 mg in 1 cc**
 - B. 4 mg in 1 cc**
 - C. 2 mg in 1 cc**
 - D. 10 mg in 1 cc**

- 5. What factor is affected by preload?**
 - A. Decreased blood pressure**
 - B. Cerebral perfusion**
 - C. Filling volumes**
 - D. Cardiac output**

- 6. What defines an anticoagulant agent?**
- A. It promotes platelet formation**
 - B. It prevents blood clotting**
 - C. It increases blood viscosity**
 - D. It enhances the clotting cascade**
- 7. What is the NYHA classification for a patient on a ventricular assist device?**
- A. I - No limitation of activity**
 - B. III - Marked limitation of activity**
 - C. IV - Severe limitation of activity**
 - D. II - Slight limitation of activity**
- 8. During an angioplasty, what is the main role of a stent?**
- A. To dissolve blood clots**
 - B. To reduce workload on the heart**
 - C. To keep the artery open after dilation**
 - D. To lower cholesterol levels**
- 9. When utilizing a temporary pacemaker, where is the lead typically placed?**
- A. Left atrium**
 - B. Right ventricle**
 - C. Left ventricle**
 - D. Coronary sinus**
- 10. True or False: If a patient has a creatinine greater than 1.4, contrast volume should be minimized.**
- A. True**
 - B. False**
 - C. Not applicable**
 - D. Only for certain patients**

Answers

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1. C
2. C
3. A
4. B
5. C
6. B
7. C
8. C
9. B
10. A

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Explanations

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1. Which arteries are visualized using the head hunter catheter?

- A. Left and right femoral arteries**
- B. Left and right pulmonary arteries**
- C. Left and right ICA and ECA**
- D. Left and right coronary arteries**

The head hunter catheter is specifically designed for selective catheterization of the vessels arising from the carotid system, primarily targeting the internal carotid artery (ICA) and the external carotid artery (ECA). This catheter has a distinct shape that allows it to navigate through the aortic arch and reach these critical arteries effectively, facilitating diagnostic and interventional procedures related to the carotid arteries, which supply blood to the brain and face. The other arterial options discussed do not align with the primary use of the head hunter catheter. For instance, the femoral arteries are typically accessed using different specialized catheters. The pulmonary arteries, being part of the right heart's output, are generally accessed through catheters designed to maneuver through the right side of the heart and into the pulmonary circulation. Lastly, while the coronary arteries are vital for cardiac interventions, they require specific catheters such as the Judkins or Amplatz catheters for effective cannulation. Understanding the anatomy and the specific applications of varying catheters in cardiovascular interventions is crucial for optimal practice in the field.

2. Which of the following is a key feature of a platelet inhibitor?

- A. Increases heart rate**
- B. Inhibits thrombin formation**
- C. Blocks IIB/IIIa receptors**
- D. Reduces blood pressure**

The key feature of a platelet inhibitor is its ability to block IIB/IIIa receptors on the surface of platelets. This mechanism plays a critical role in preventing platelet aggregation, which is essential in processes such as thrombosis and the formation of blood clots. By inhibiting these receptors, platelet inhibitors effectively reduce the risk of clot formation, especially in certain cardiovascular conditions. In the context of other options, increasing heart rate is typically associated with certain medications or conditions but does not relate to the action of platelet inhibitors. Similarly, while inhibiting thrombin formation is a critical aspect of anticoagulant therapy, it is not a primary action of platelet inhibitors, which primarily focus on blocking receptor sites to prevent aggregation. Reducing blood pressure is also unrelated to the mechanism of platelet inhibitors, as these agents do not primarily function to influence blood pressure levels.

3. Chronic untreated hypertension is associated with which of the following?

- A. A risk factor for coronary artery disease**
- B. Decreased preload**
- C. Increased afterload**
- D. Indication for Coumadin therapy**

Chronic untreated hypertension significantly increases the risk of developing coronary artery disease because high blood pressure exerts extra force against the walls of blood vessels. This persistent strain can lead to damage of the arterial walls, promoting the development of atherosclerosis, where plaque builds up in the arteries. As the arteries narrow, there is an increased risk of blockages, which can result in angina or heart attacks. Therefore, recognizing chronic hypertension as a risk factor for coronary artery disease is essential in early diagnosis and treatment to prevent serious cardiovascular events. In contrast, the other options relate to different physiological effects or medical considerations. Decreased preload typically occurs in conditions involving reduced blood volume or venous return, which is not a direct consequence of persistent hypertension. Increased afterload, while often associated with hypertension due to the increased resistance the heart must work against, is not the primary concern regarding the risk of coronary artery disease in this context. Indications for Coumadin therapy are usually related to thromboembolic disorders rather than hypertension itself.

4. Lidocaine converts from 2GM in 500cc to what concentration?

- A. 6 mg in 1 cc**
- B. 4 mg in 1 cc**
- C. 2 mg in 1 cc**
- D. 10 mg in 1 cc**

To determine the concentration of lidocaine when 2 grams (2GM) are dissolved in 500 cc, you need to convert grams to milligrams and then calculate the concentration. First, convert grams to milligrams: 2 grams is equal to 2000 milligrams since 1 gram is 1000 milligrams. Next, to find the concentration in mg per cc, divide the total milligrams by the total volume in cc: $2000 \text{ mg} / 500 \text{ cc} = 4 \text{ mg/cc}$. Thus, the concentration of lidocaine in this case is 4 mg in 1 cc. This calculation shows the correct understanding of converting units and calculating concentration in solution. The other options present different concentrations which do not match the calculated value.

5. What factor is affected by preload?

- A. Decreased blood pressure
- B. Cerebral perfusion
- C. Filling volumes**
- D. Cardiac output

Preload refers to the degree of stretch of the heart muscle fibers at the end of diastole, which is influenced by the volume of blood filling the ventricles just before contraction. As such, filling volumes directly relate to the concept of preload. An increased filling volume results in greater preload, leading to a more forceful contraction according to the Frank-Starling law of the heart. This relationship illustrates how preload affects the efficiency of the heart's pumping ability, thereby having a fundamental impact on cardiac function. In contrast, while cardiac output can be influenced by preload, it is actually a result of various factors including heart rate and contractility, making it a more complex parameter. Decreased blood pressure and cerebral perfusion, while they may be affected by changes in preload, are not directly defined by it. Thus, filling volumes are the most accurate representation of how preload is impacted, highlighting its significance in understanding cardiovascular dynamics.

6. What defines an anticoagulant agent?

- A. It promotes platelet formation
- B. It prevents blood clotting**
- C. It increases blood viscosity
- D. It enhances the clotting cascade

An anticoagulant agent is specifically defined by its ability to prevent blood clotting. This characteristic is critical in various medical settings, such as managing conditions that require the inhibition of the coagulation process to reduce the risk of thrombosis and embolism. Anticoagulants work by interfering with the biochemical pathways that lead to coagulation, thereby maintaining blood flow and preventing the formation of clots that can obstruct blood vessels. The other options illustrate processes that are contrary to the function of anticoagulants. For instance, promoting platelet formation would encourage clotting rather than prevent it, while increasing blood viscosity could contribute to the risk of clot formation by making it harder for blood to flow smoothly. Enhancing the clotting cascade is directly opposite to the action of anticoagulants, which aim to inhibit that very cascade to prevent clots from developing. Thus, the defining feature of an anticoagulant agent is its role in preventing blood clotting.

7. What is the NYHA classification for a patient on a ventricular assist device?

- A. I - No limitation of activity**
- B. III - Marked limitation of activity**
- C. IV - Severe limitation of activity**
- D. II - Slight limitation of activity**

The New York Heart Association (NYHA) classification system helps in assessing heart failure severity based on a patient's functional capacity. A patient on a ventricular assist device (VAD) typically experiences a significant impact on their physical activity due to the severity of their condition, which is why the classification as "IV - Severe limitation of activity" is appropriate. Patients classified as IV in the NYHA scale generally cannot carry out any physical activity without discomfort and may have symptoms even at rest. This aligns with the typical scenario for individuals relying on a VAD, who often experience profound limitations in their ability to perform daily activities due to their heart condition and reliance on mechanical support for circulation. The VAD serves to assist the heart's function, but this does not eliminate the patient's underlying cardiac dysfunction that leads to the classification. The other classifications reflect varying degrees of activity limitation but do not accurately describe the significant functional impairment associated with the use of a VAD. For instance, those classified as I experience no limitations, while those in II and III experience mild to moderate limitations, which do not reflect the more severe challenges faced by someone using a VAD.

8. During an angioplasty, what is the main role of a stent?

- A. To dissolve blood clots**
- B. To reduce workload on the heart**
- C. To keep the artery open after dilation**
- D. To lower cholesterol levels**

The main role of a stent during an angioplasty is to keep the artery open after it has been dilated. When a narrowed or blocked artery is treated with angioplasty, a balloon catheter is inserted and inflated to widen the artery. To ensure that the artery remains open and does not collapse again, a stent, which is a small mesh-like tube, is placed in the artery at the site of dilation. This stent acts as a scaffold, providing structural support to the artery walls, thereby reducing the likelihood of re-narrowing and maintaining adequate blood flow. The other choices represent different functions that are not relevant to the specific role of a stent. For instance, dissolving blood clots pertains to thrombolytic therapies rather than the mechanical support provided by a stent. Reducing the workload on the heart generally involves medications or lifestyle changes, which are not related to the physical placement of a stent. Lastly, lowering cholesterol levels is primarily managed through dietary changes or medications, which again does not correlate directly with the function of a stent during angioplasty.

9. When utilizing a temporary pacemaker, where is the lead typically placed?

- A. Left atrium**
- B. Right ventricle**
- C. Left ventricle**
- D. Coronary sinus**

The lead of a temporary pacemaker is typically placed in the right ventricle. This positioning is critical for effective pacing because the right ventricle is directly involved in pumping blood to the pulmonary artery, where it can then go to the lungs for oxygenation. Placing the lead in the right ventricle allows for the electrical impulses generated by the pacemaker to stimulate the heart muscle effectively, promoting coordinated contractions and maintaining a sufficient heart rate. In contrast, leads placed in locations such as the left atrium, left ventricle, or coronary sinus do not provide the same level of efficacy in pacing, particularly for addressing issues related to ventricular function or heart rate management. The utilization of the right ventricle for lead placement ensures that the pacemaker can adequately support the heart's pumping action, especially in situations of bradycardia or other types of heart block, where reliable pacing is necessary to ensure adequate cardiac output.

10. True or False: If a patient has a creatinine greater than 1.4, contrast volume should be minimized.

- A. True**
- B. False**
- C. Not applicable**
- D. Only for certain patients**

Minimizing contrast volume for a patient with a creatinine level greater than 1.4 is a prudent approach. Elevated creatinine levels indicate compromised kidney function, which puts the patient at a higher risk for contrast-induced nephropathy. When contrast agents are used during imaging or other procedures, they can sometimes cause further damage to already stressed kidneys. Therefore, reducing the amount of contrast used is a critical precaution to protect renal health and ensure patient safety. While there may be specific considerations based on individual patient circumstances, in general, a creatinine level above 1.4 serves as a clear indicator that careful consideration should be given to the risks associated with using contrast media. This approach is especially important in nephrology and radiology practices to avoid potential worsening of renal function.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://rcis.examzify.com>

We wish you the very best on your exam journey. You've got this!

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